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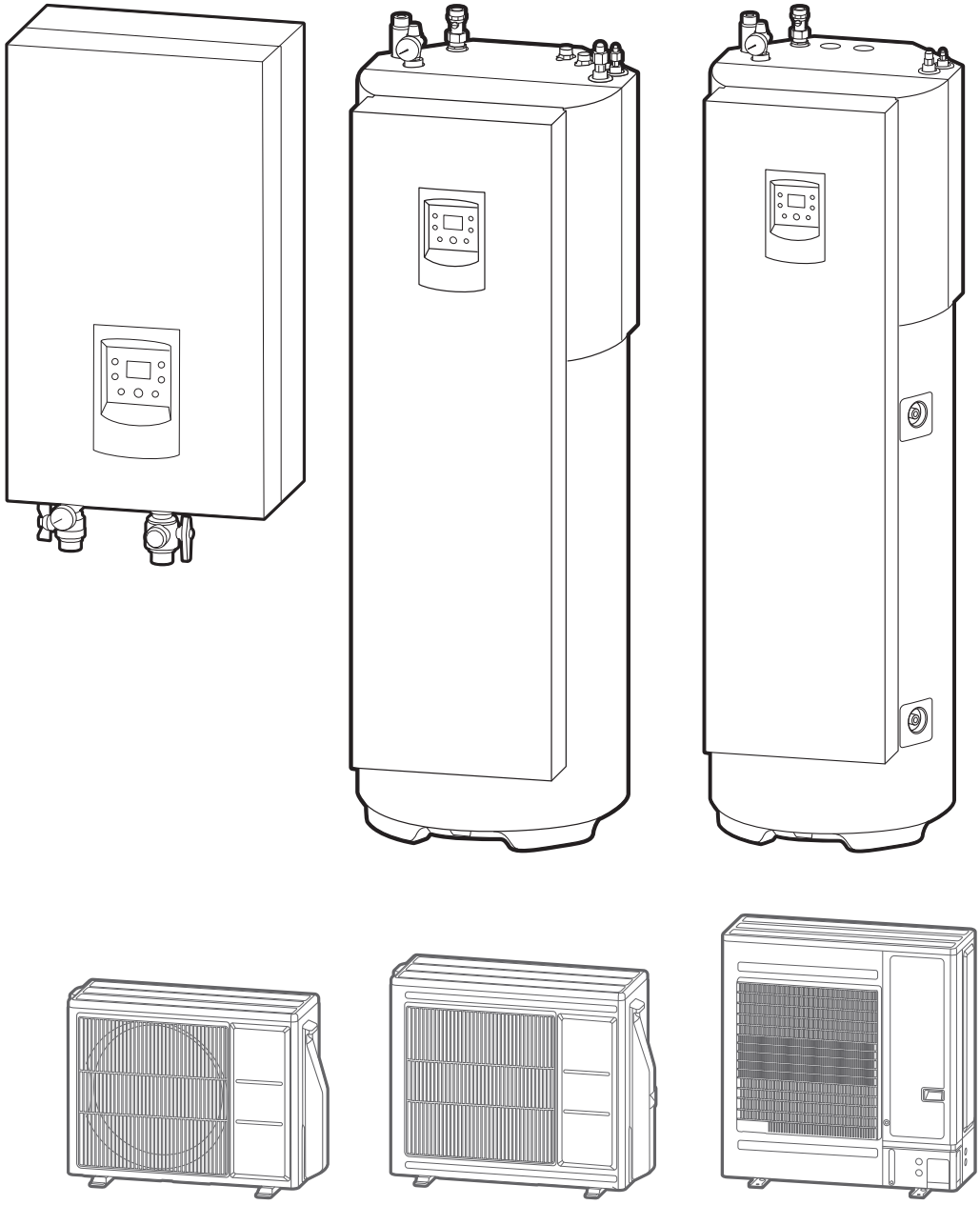


EN

USE

THERMA TCC06-08-11X
THERMA TCD03-05-06-08-11X
THERMA TCDXL05-06-08-11X

Air/water heat pump split system

For professionals and users. To be kept by the user for future reference

Contents

This document was written in French and translated.

▶Symbols and definitions

Warning. Risk of serious injury to the person and / or risk of damage to the machine. Observe the warning.	Bad practice
Important information that must always be kept in mind.	Warning : Electricity hazard.
Tips and tricks / Advice	Warning : Slightly flammable refrigerant.

* Depending on configuration / option

Safety instructions

Please comply with the following instructions in order to avoid any risk of injury or inappropriate use of the appliance.

Commissioning

Do not switch the appliance ON until every filling operation has been performed

Do not attempt to install this appliance yourself. This heat pump must be installed by qualified personnel holding a certificate of competence.

The installation must always be properly earthed and fitted with a safety circuit breaker.

Do not change the power supply.

The appliances are not fireproof and therefore MUST NOT be installed in an explosive environment.

How to Use

This appliance can be used by children from 8 years old and by persons with reduced physical, sensory or mental capabilities or without experience or knowledge, provided that they are properly supervised or if they have been given instructions on how to use the appliance safely and the risks involved have been understood. Children must not play with the appliance. Cleaning and maintenance by the user must not be carried out by children without supervision.

This device is not intended for use by persons (including children) whose physical, sensory or mental capabilities are reduced, or persons without experience or knowledge, unless they have benefited from the intermediary of a person responsible for their safety, surveillance or prior instructions concerning the use of the device. Children should be supervised to ensure that they do not play with the appliance.

Do not let children insert foreign objects into the propeller protection grate or climb on the outdoor unit. The fins of the air heat exchanger are extremely thin and can cause cuts.

Nothing should obstruct the air circulation through the evaporator and out from the fan.

The outdoor unit must only be installed outside. If a shelter is required,it must have broad openings on all 4 sides and respect the installation clearances (see your installation engineer).

Do not climb on the outdoor unit.

Caution: copper pipes that carry refrigerating fluid may be hot and cause burns.

The room in which the unit is operating must be correctly ventilated in order to avoid any shortage of oxygen in the event of a refrigerant gas leak.

If your installation location already meets safety standards, do not carry out any modifications (ventilation, exhaust evacuation, openings, etc.) without the advice of your installation engineer.

Do not place any heat source under the remote control.

To avoid the risk of suffocation, keep plastic bags or plastic film of packaging materials away from young children.

Maintenance

Do not try to repair the appliance yourself.

If the power cable is damaged, it must be replaced by qualified personnel to avoid a danger.

This appliance does not contain any components which can be repaired by the user. Removing either of the covers can expose you to dangerous electrical voltages.

Switching off the current is not sufficient to protect you from any external electrical shocks (condensers).

Do not open the outdoor unit or the hydraulic unit while they are in operation.

If you hear unusual noises, smell smoke or other odours coming from the appliance, turn off the power and contact your installation engineer.

Before starting any cleaning, turn off the power to the appliance.

Do not use aggressive cleaning liquids or solvents to clean the body work.

Do not use a pressure hose to clean the outdoor unit. You risk damaging the air exchanger and causing water ingress in the electrical circuits.

Your installation

Outdoor unit

The outdoor unit, as its name suggests, is placed outside your dwelling, and extracts energy from the outside air.

This unit was installed by your installer in a location where it is able to operate with best performance.

Nothing should obstruct the air circulation through the evaporator and out from the fan.

The water contained in the air may condense and flow out of the outdoor unit. The outdoor unit can generate a large volume of water called condensate.

In cold weather, this water freezes on contact with the exchanger and must be regularly removed using the defrosting cycles. The defrosting cycle is managed automatically by the control system and can produce steam emissions which are completely normal.

Hydraulic unit

The hydraulic unit is located in your boiler room, cellar, garage, and transfers energy to the heating and domestic hot water circuits*.

The hydraulic unit contains the appliance's control system which manages the room temperature and the production of domestic hot water.

The hydraulic unit is fitted with an electrical backup* or boiler connection* which intervenes to provide additional heat during the coldest periods.

Settings

Your installer has carefully adjusted your installation. Do not change the settings without their consent. If in doubt, do not hesitate to contact them.

Your heating system is controlled by adjustment in relation to the outdoor temperature (temperature control).

The outside sensor monitors the outdoor temperature.

The installation of a room thermostat (option) makes it possible to improve the operation of the control system (influence of the ambient temperature is taken into account).

Radiators

In order to ensure operation of the control system, the room containing the thermostat must not also contain a thermostatic valve. If this is the case, it must be opened as far as possible.

Underfloor heating system

A new underfloor heating system must initially be heated slowly to avoid any problems involving cracking. Check with your installer that this initial heating procedure has indeed been performed before freely using your heating system.

An underfloor heating system's significant inertia prevents sudden room temperature differences. However, this inertia implies a reaction time of around several hours (approx 6 hours).

Any changes to the setting must be made slowly and leave the installation sufficient time to react. Any exaggerated or abrupt adjustments to the settings always result in significant temperature fluctuations during the day.

Similarly if your dwelling has an underfloor heating system, do not reduce it or switch it off if you will be absent for only short periods. The reheating period is always quite long (approx 6 hours).

Fan coils / dynamic radiators with an integrated control system

Do not use a room sensor in the area in question.

Domestic Hot Water (DHW)*

When hot water is required, the heat pump adapts its priority to meet the request.

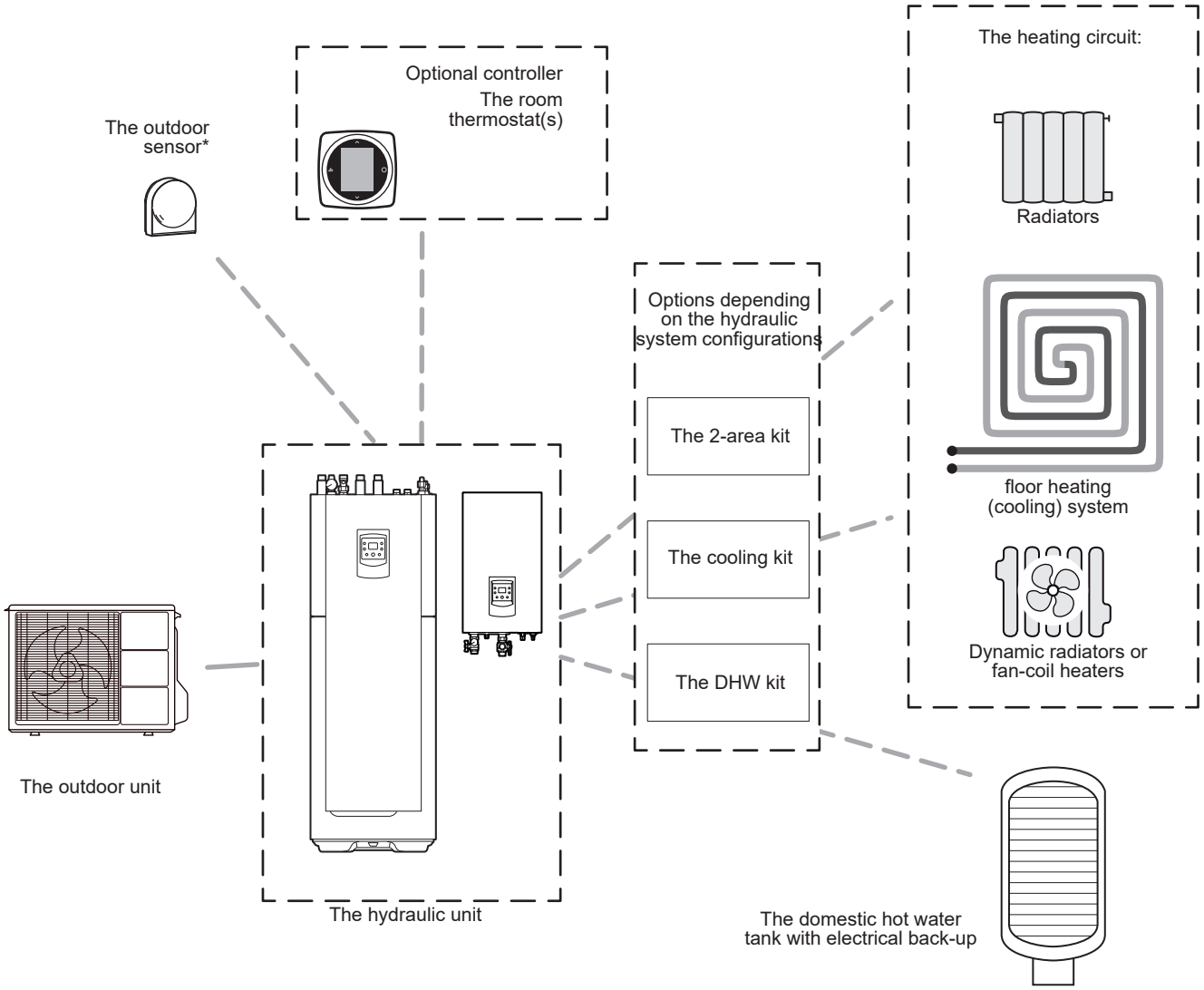
No heating is produced during the preparation of domestic hot water.

The heat pump produces the domestic hot water (DHW), which is then additionally heated, if required, by the electrical backup.

To ensure a DHW setpoint over 45°C, the electrical backup heating or boiler (boiler connection kit)* must be left on.

The electrical backup allows the correct operation of the anti-legionella cycles.

* Depending on configuration / option

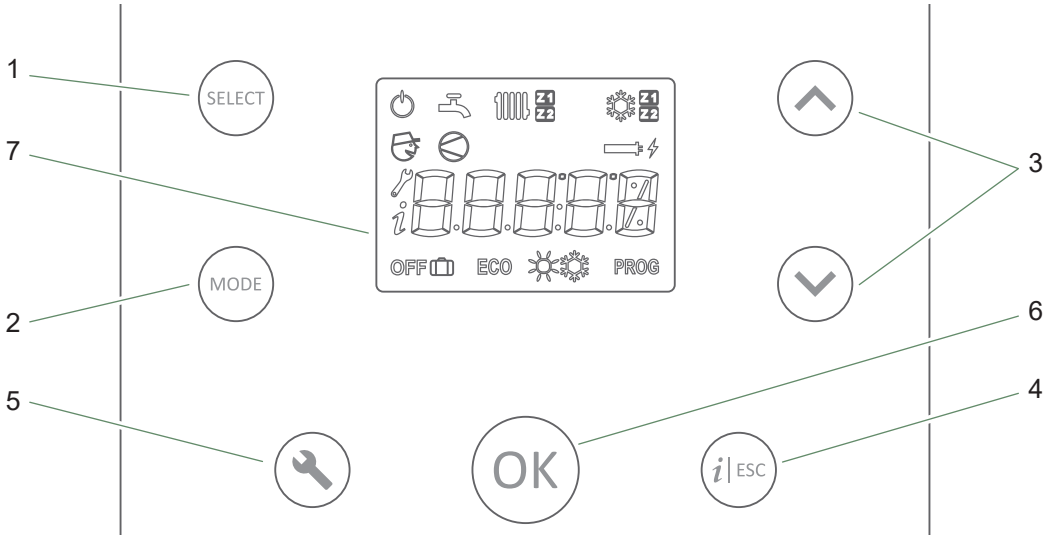


* depending on configuration / option

fig. 1 - Overall view of the configuration of a complete installation

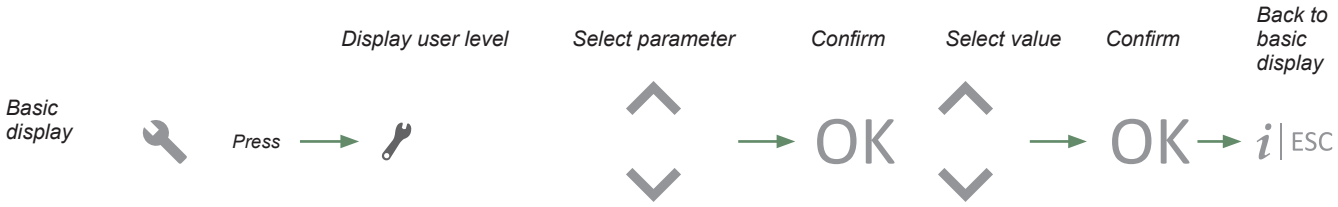
Controller Interface

User interface



Ref.	Functions	- Definition of the functions
1	• SELECT	- Browse and select the available **uses**.
2	• MODE	- Browse and select the **mode** for the pre-selected use.
3	• Settings • Scrolling	- Configure the setpoints of the selected function using the ^ and v **keys.** - Scroll through the information and parameter lines. - Configure the modifiable values (after pressing OK to confirm).
4	• Information • "ESC" output	- Access the "**information**" menu (the i | ESC icon appears) - **Exit** the menu currently displayed - **Cancel** a modification being made
5	• Configuration	- Access the **user** level (press and release: the icon appears).
6	• OK	- Confirm (Configuration, Setpoint for the pre-selected mode)
7	• Display	- Display: see *"Display Description"* - View the settings.

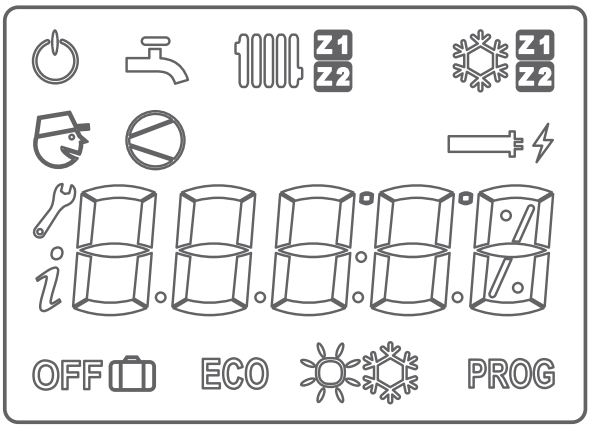
Setting parameters on the user interface



If no setting is made for 15 minutes, the screen automatically returns to the basic display.

Some settings (or menus) might not be displayed. They are dependent on the installation's confi guration (and installed options).

▶ Display Description



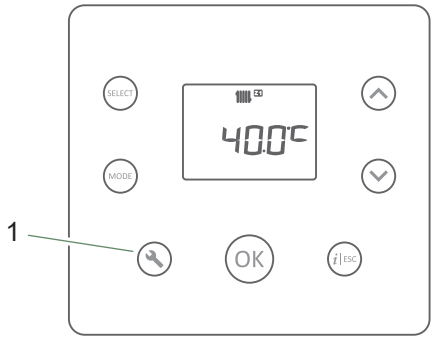
Icons	Definitions
	Access the **User** settings
Z1 Z2	**Use for heating** (reference to the circuit concerned Z1 or Z2)
	Use for DHW
Z1 Z2	**Use for cooling** (reference to the circuit concerned Z1 or Z2)
	Stand-by (1)
	Compressor operation
	Electrical back-up operation (heating or DHW)
PROG	**PROG mode:** Controlled operation according to the: - programme set in the User interface or the - programme set on the room thermostat

Icons	Definitions
ECO	**Constant mode** (with **reduced** temperature setpoint)
or	**Constant mode** for heating or cooling (with **comfort** temperature setpoint)
	Absence mode
OFF	The use concerned is in Off mode (area 1 / 2 - DHW)
	Read information
	Access the **Installer** settings

(1) Frost protection provided that the electric power supply to the HP is not switched off.

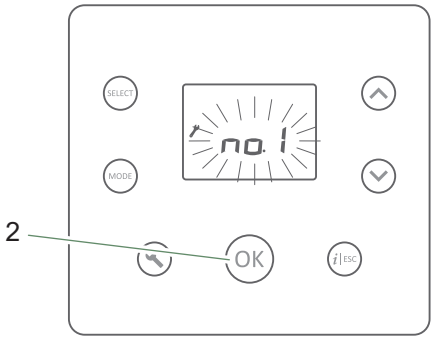
Some settings (or menus) might not be displayed. They are dependent on the installation's confi guration (and installed options).

▶ Time setting



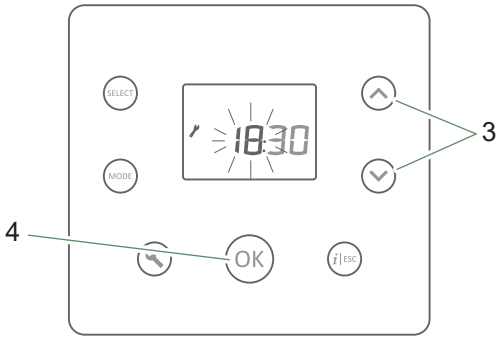
Basic display.

1 - Press



- The "key" icon appears,
- Alternation between the "time settings" parameter (line No. 1) and the time (e.g. 18:30) (NO. 1 / 18:30):

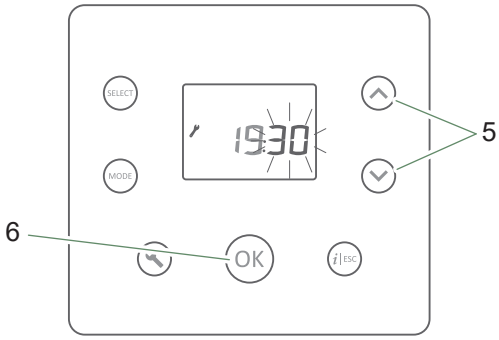
2 - Press OK to change the time.



- The hour display flashes.

3 - Press the ∧ or ∨ button to set the hour.

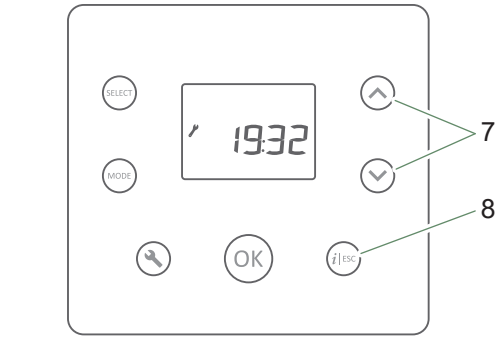
4 - Press OK to confirm.



The minutes display flashes.

5 - Press the ∧ or ∨ button to set the minutes.

6 - Press OK to confirm.



- The settings are saved.

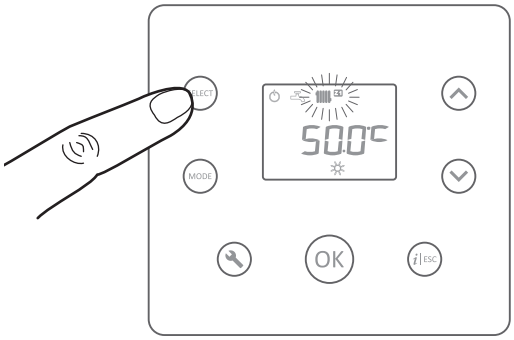
7 - Press the ∧ or ∨ button to change other settings.

or the

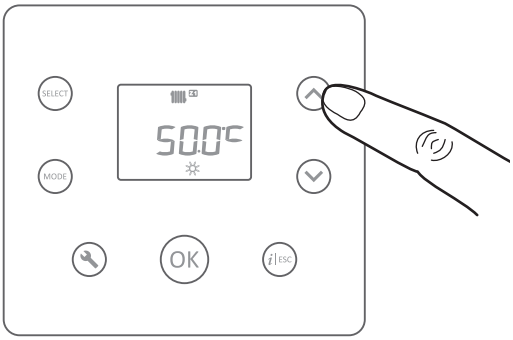
8 - Press i | ESC to return to the basic display.

▶ Operation of heating

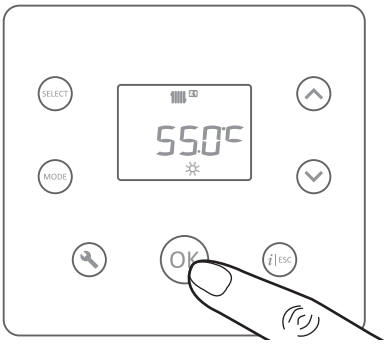
▼ Without room thermostat



Press the SELECT button to select the heating use



Change the temperature setpoint using the following buttons ^ and v



Confirm with the key OK

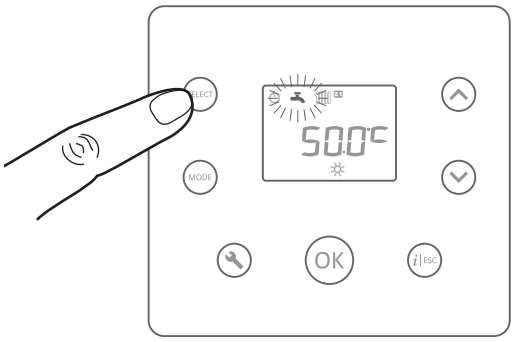
▼ With room thermostat

➔ See the instructions for the thermostat.

▶ Operation of Hot water

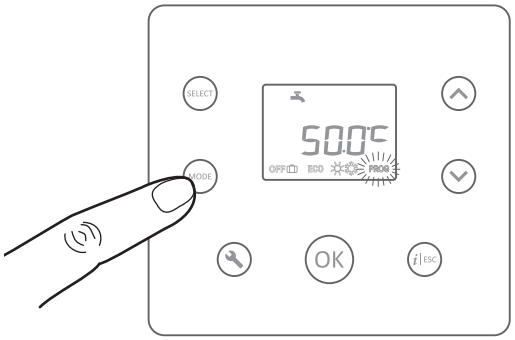
▼ Selecting the mode

■ Selecting DHW USE



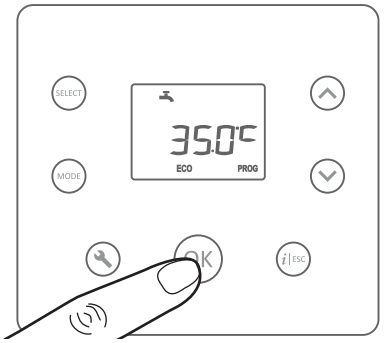
Press the SELECT button several times.
The icon flashes.

■ Selecting the MODE



Press the MODE button several times.
The icon flashes.

PROG	Automatic switching comfort <-> reduced heating depending on the time programme.
☼	Constant comfort mode.
ECO	Constant reduced mode.
OFF	Off mode (for DHW).



Confirm with the key OK

When browsing, the temperature setpoints can be modified at any time using the ^ or v buttons.

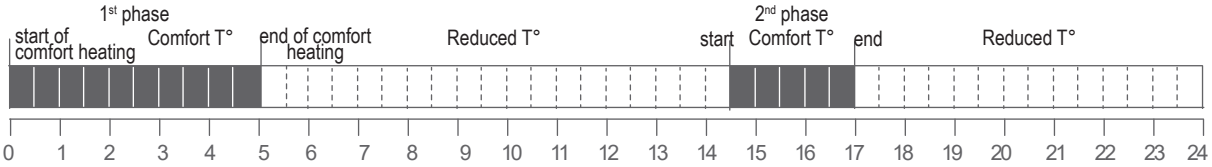
Press OK to confirm. Before exiting, check that you have confirmed the desired mode.

In the event of extreme outdoor temperatures, the electrical back-up system of the DHW tank must be left in operation to guarantee a DHW setpoint greater than 45°C.

* depending on configuration / option

▼ Changing the DHW timer programme

The default DHW timer programme is set for the whole week (Monday to Sunday: 10): from 12 a.m. to 5 a.m. (1st DHW heating phase) and from 2:30 p.m. to 5 p.m. (2nd DHW heating phase).



For your comfort you can set up to 2 DHW heating phases and apply these over different time periods (week, day etc.).

- Example : ➔ Monday to Sunday [parameter 25 set to 10] (see table)

  ➔➔ 2 phases [12 a.m.-7 a.m. / 1:30 p.m.-5 p.m. and 5 p.m.-10:30 p.m.] (set parameters 26 to 29, see table),

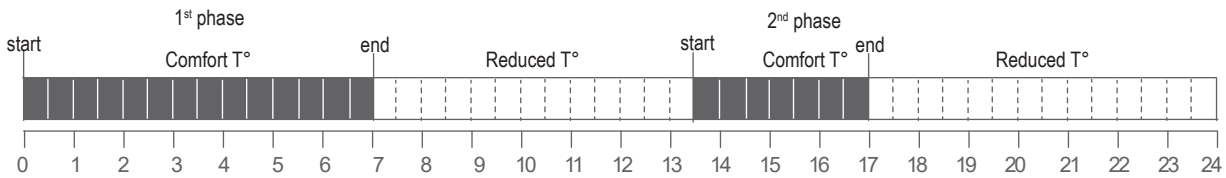
➔ Press the button to enter the "user" menu: the icon is displayed.

Selecting the line No.	*Settings*
N°25 OK	Select the day(s): **10**: Mon-Sun, **8**: Mon-Fri, **9**: Sat-Sun, **1**: Monday, **2**: Tuesday, **3**: Wednesday, **4**: Thursday, **5**: Friday, **6**: Saturday, **7**: Sunday E.g.: 10 (Monday to Sunday) OK
N°26 OK	start of comfort heating: Start-up time **for the 1st heating phase**. E.g.: 00:00 OK
N°27 OK	end of comfort heating: Shutdown time **for the 1st heating phase**. E.g.: 07:00 OK
N°28 OK	start of comfort heating: Start-up time **for the 2nd heating phase**. E.g.: 13:30 OK
N°29 OK	end of comfort heating: Shutdown time **for the 2nd heating phase**. E.g.: 17:00 OK

- Continue programming for another day (line 25).

ou

- Press i | ESC to return to the basic display.



• **DHW boost** (without room thermostat).

A DHW boost function is available (on the user interface: , parameter **95** - see *page 13*). This DHW boost enables the DHW to be heated to the comfort temperature at any time during the day. The boost function is cancelled automatically when the demand for hot water has been met.

• **DHW boost** (with room thermostat).

➔ See the instructions for the thermostat.

▶ Absence

If you are going to be away for a long time <u>and you know how long:</u>

<u>Do not switch off the general power supply.</u>

▼ Without room thermostat

■ For heating :

• Press the SELECT button to select the heating use .

• Press the MODE button to select the Off mode **OFF**

■ For hot water :

• Press the SELECT button to select the Hot water use .

• Press the MODE button to select the Off mode **OFF**

▼ With room thermostat

➔ See the instructions for the thermostat.

▶ Standby

If the installation is going to be shut down for a long time <u>and you know how long</u>

<u>Do not switch off the general power supply.</u>

Using standby mode enables you to:

- Keep all the safety mechanisms related to the appliance,
- Maintain frost protection for the appliance,
- But does not provide frost protection for the rooms in your home.

Regulation parameters

▶ Overview

• Only the parameters accessible to the following level:
- User.
are described in this document.

• The parameters accessible to the following level:
- Installer.
are described in the document reserved for these professional specialists. **Do not make any modifications to these parameters without advice from these professional specialists.**

▶ List of "End User" parameters

No.	*Function*	*Configuration or display range*	*Basic setting*
0	Switch heating / cooling	0 (heating)... 1(cooling)	**0**
Time / Date setting			
1	Hours / minutes	00:00... 23:59	**01:00**
2	Month / Day	1 - 12 .... 1 - 31	**MM-DD**
3	Year	2018 ...	**YYYY**
Absence mode			
10	Absence mode temperature setpoint	5 °C... 20 °C	**13 °C**
	Adjustment of the temperature setpoint used during absence mode.		
11 → 24 : Parameters not used			
DHW timer programme (1)			
25	Pre-selection (day / week)	1 ... 10	**-**
	1 = Monday; **2** = Tuesday… **7** = Sunday; **8** = Monday to Friday; **9** = Saturday and Sunday **10** = Monday to Sunday (modifications are applied to the whole week)		
26	1st phase of the selected day (start of comfort)	00:00... 23:45	**00:00**
27	1st phase of the selected day (end of comfort)	00:15... 24:00	**05:00**
28	2nd phase of the selected day (start of comfort)	00:00... 23:45	**14:30**
29	2nd phase of the selected day (end of comfort)	00:15... 24:00	**17:00**
Heat pump			
72	Switch from summer/winter (according to the outdoor temperature)	15... 30 °C	**18 °C**
	When the average of the outdoor temperatures reaches 18°C, the regulator switches off the heating (as an economy measure).		
73	Legionella function (1)	0 (off)... 1 (on)	**0**
74	Correction of outdoor temperature sensor (1)	- 5... 5 °C	**-**
82	Activation of summer time	0 (no)... 1 (yes)	**1**
95	DHW boost (1)	0 (Assist mode off)... 1 (Assist mode on)	**0**
97	Assist mode	0 (off)... 1 (on)	**0**

Some settings (or menus) might not be displayed. They are dependent on the installation's confi guration (and installed options).

▶ Displaying information

The *i* | ESC button calls up various information.

Depending on the appliance type, the configuration and the state of operation, certain information lines may not be available.

• List of information

i No...	Name	Value...
1	Time.	hh:mm
2	Outdoor temperature.	... °C
3	Circuit 1: Initial temperature.	... °C
4	Circuit 1: Initial setpoint.	... °C
5	Return temperature.	... °C
6	Flow measurement.	... l/min
7	Compressor modulation level.	... %
8	Heating back-up status.	0 = off 1 = on
9	Circuit 2: Initial temperature.	... °C
10	Circuit 2: Initial setpoint.	... °C
11	DHW temperature.	... °C
12	DHW setpoint.	... °C
13	HP status.	see details § *"Status list"*
14	Heating circuit 1 status.	
15	Heating circuit 2 status.	
16	DHW circuit status.	
17	DHW back-up status.	0 = off 1 = on
18	Outdoor unit error code.	-
Energy consumption		Value...
30	Heat. - Energy consumed this month	... kWh
31	Heat. - Energy consumed last month	... kWh
32	Heat. - Energy consumed this year	... MWh
33	Heat. - Energy consumed last year	... MWh
40	Cool. - Energy consumed this month	... kWh
41	Cool. - Energy consumed last month	... kWh
42	Cool. - Energy consumed this year	... MWh
43	Cool. - Energy consumed last year	... MWh
50	DHW - Energy consumed this month	... kWh
51	DHW - Energy consumed last month	... kWh
52	DHW - Energy consumed this year	... MWh
53	DHW - Energy consumed last year	... MWh

Operating counter		
60	Number of hours HP ON	... h
61	Total number of compressor starts	---
62	Number of hours in DHW (compressor OFF or ON)	... h
63	Number of hours in DHW (compressor ON)	... h
64	Number of compressor starts in DHW	---
65	Number of hours with DHW back-up ON	... h
66	Number of hours of heating (compressor OFF or ON)	... h
67	Number of hours of heating (compressor ON)	... h
68	Number of compressor starts in heating	---
69	Number of hours with heating back-up ON	... h
70	Number of hours of air-conditioning (compressor OFF or ON)	... h
71	Number of hours of air-conditioning (compressor ON)	... h
72	Number of compressor starts in air-conditioning	---
73	Number of hours main circulator pump ON	... h

• **Status list**

No.	Value...	HP status
13	0	Pending.
	1	Heating.
	2	Cooling.
	3	Error.
	4	Assist mode.
	5	Locked.
	6	Defrost activated.
	7	Test mode.
No.	**Value...**	**Heating circuit 1 and 2 status**
14 & 15	0	Pending.
	1	Comfort heating mode.
	2	Reduced heating mode.
	3	Comfort cooling mode.
	4	Reduced cooling mode.
	5	Absence mode.
	6	Controlled by the room thermostat.
	7	Frost protection activated.
	8	Floor drying mode.
	9	Rate input activated.
No.	**Value...**	**DHW status**
16	0	Pending.
	1	Comfort mode, charge activated.
	2	Reduced mode, charge activated
	3	Legionella charge.
	4	Frost protection activated.
	5	Forced operation. (boost)

Maintenance

In order to ensure that your appliance operates correctly for many years, the maintenance operations described below are required periodically. They are generally carried out as part of a maintenance contract.

▶ Regular checks

- Periodically check the water pressure in the heating circuit (refer to the pressure level recommended by the installer - between 1 and 2 bar).
- If you need to fill up and reset the pressure, check the type of fluid originally used (if in doubt, contact your installer).

If frequent refills are required it is essential that you look for any leaks.

The frequent supply of water risks causing scale to build up within the heat exchanger and degrade its performance and life.

▶ Outdoor unit check

Remove any dust from the exchanger making sure you do not damage the blades.

Check that there is nothing hindering the air flow.

▶ Domestic hot water tank*

Maintenance on the tank must be carried out regularly (frequency may vary according to water hardness).

Consult your heating engineer.

▶ Error messages

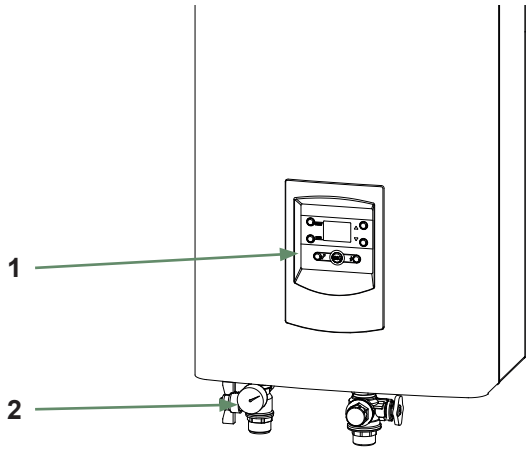
The faults or breakdowns of the hydraulic unit are reported on the display unit of the user interface. The display shows the "Erxxx" error code.

Note the code and contact your installer.

▼ Error 3 or 131

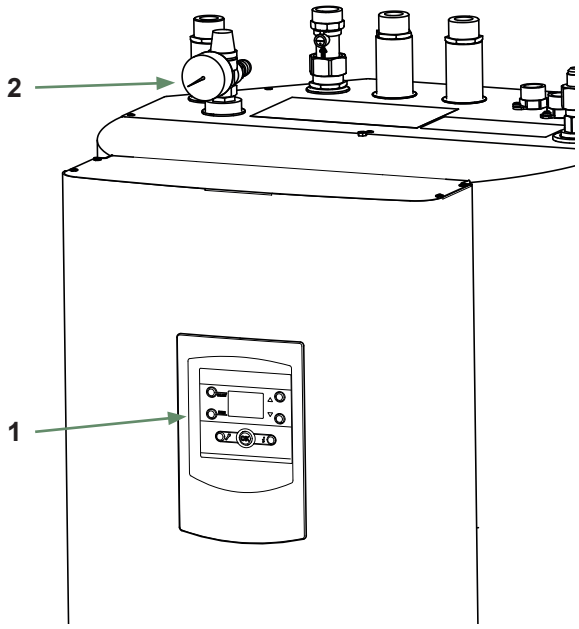
In case of error 3 or 131, check that the thermostatic valves are open.

If the problem persists, call your installer.



1. User interface (Operator section)
2. Pressure gauge (installation hydraulic pressure)

fig. 2 - Single service



1. User interface (Operator section)
2. Pressure gauge (installation hydraulic pressure)

fig. 3 - Dual service

* Depending on configuration / option

End-of-life of the appliance

The appliances must be dismantled and recycled by a specialised service. The appliances must not, under any circumstances, be thrown out with household waste, bulky waste or at a tip.

At the end of its service life, please contact your installer or local representative to proceed with its dismantling and recycling.

Date de la mise en service :

Coordonnées de votre installateur chauffagiste ou service après-vente.

www.thercon.be

Thercon NV
Langlaarsteenweg; 166
B-2630 Aartselaar